

FIG. 1
(PRIOR ART)

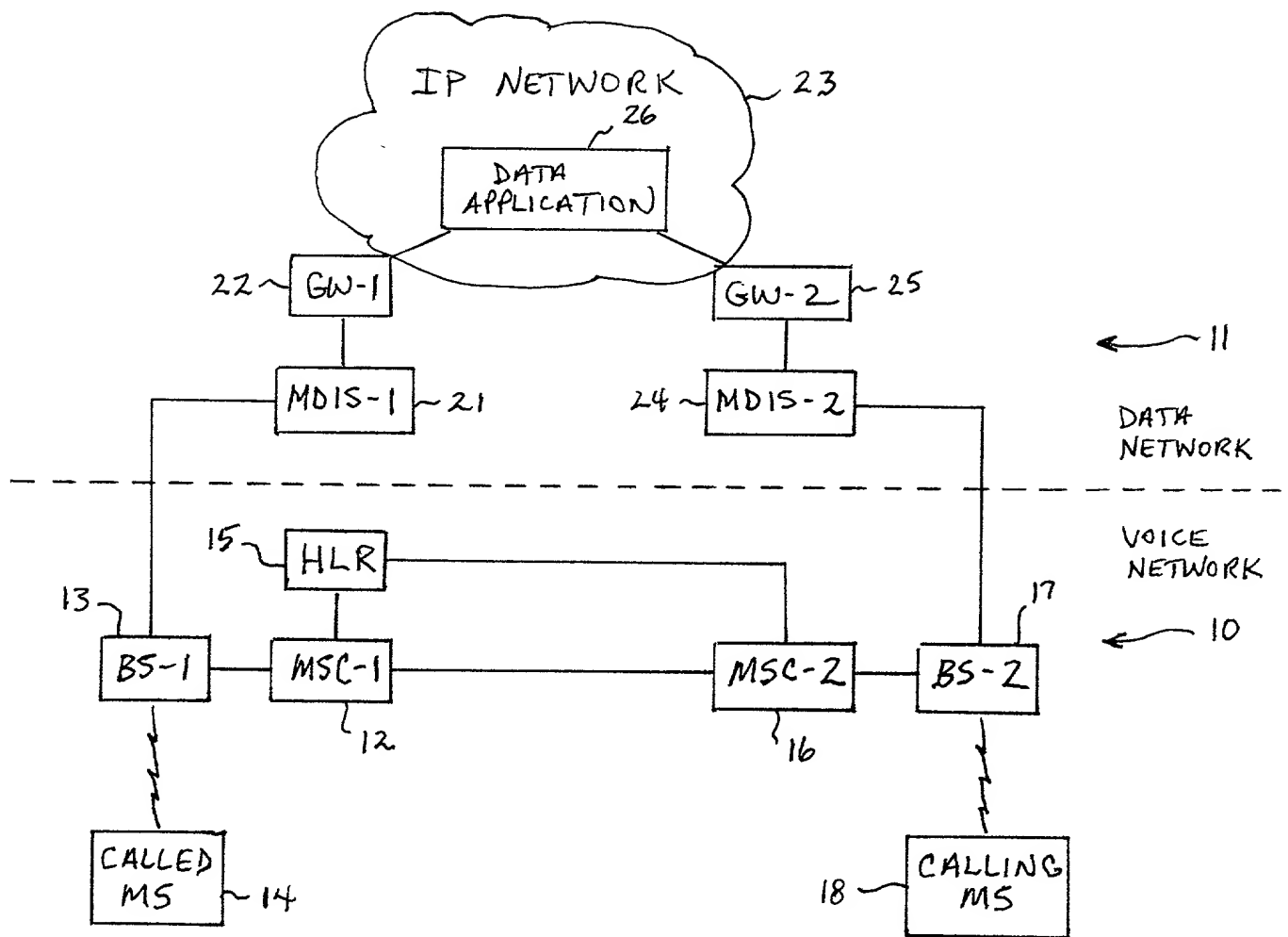
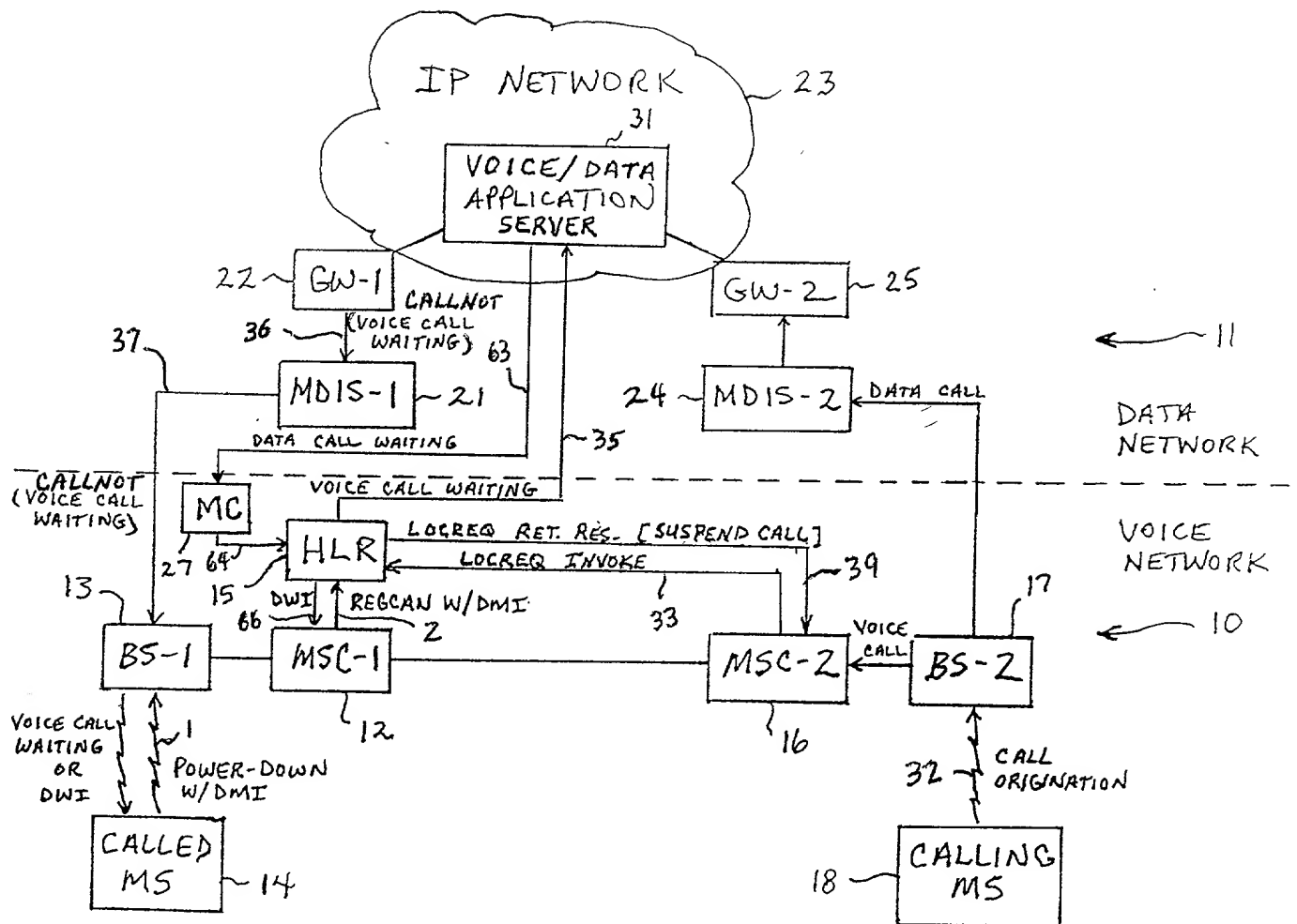


FIG. 2



The diagram illustrates the sequence of messages for call processing between several entities: CALLED MS (14), MSC-I (12), MDIS-1 (21), V/D APPLICATION SERVER (31), HLR (15), MSC-Z (16), and CALLING MS (18). The process involves the following steps:

- Initial Call:** CALLED MS (14) sends an **ACCEPT CALL** (38) to MSC-I (12).
- Call Setup:** MSC-I (12) sends **CALLNOT INVOKED** (37) to MDIS-1 (21). MDIS-1 (21) sends **CALLNOT INVOKED** (36) to the V/D APPLICATION SERVER (31). The V/D APPLICATION SERVER (31) sends **CALLNOT INVOKED** (35) to the HLR (15).
- HLR Processing:** The HLR (15) sends **LOCREQ INVOKED** (33) to MSC-Z (16). MSC-Z (16) sends **CALL ORIG.** (32) to the CALLING MS (18). The HLR (15) also sends **LOCREQ R.R.-1** (39) to the V/D APPLICATION SERVER (31).
- Routing and Call Delivery:** The V/D APPLICATION SERVER (31) sends **CALLNOT R.R.** (43) to the HLR (15). The HLR (15) sends **REGNOT** (45) to the V/D APPLICATION SERVER (31). The V/D APPLICATION SERVER (31) sends **ROUTERREQ INVOKED** (48) to the V/D APPLICATION SERVER (31). The V/D APPLICATION SERVER (31) sends **ROUTERREQ RETURN RESULT** (49) to the V/D APPLICATION SERVER (31). The V/D APPLICATION SERVER (31) sends **CALL DELIVERED** (52) to the V/D APPLICATION SERVER (31).
- Call Completion:** The V/D APPLICATION SERVER (31) sends **LOCREQ R.R.-2** (51) to the HLR (15). The HLR (15) sends **VOICE CALL WAITING FROM MSC-Z** (47) to the V/D APPLICATION SERVER (31). The V/D APPLICATION SERVER (31) sends **CALLNOT R.R.** (44) to the HLR (15). The HLR (15) sends **PROCESSING ANNOUNCEMENT** (41) to the CALLING MS (18).

VOICE NETWORK

DATA NETWORK

VOICE NETWORK

FIG. 4

